

### **REMARKS**

In the foregoing amendment Claims 4 and 7 have been amended to clarify the claimed invention. Claims 4, 7, 20 and 21 are currently pending in this application. For the reasons set forth below, Applicant believes that the rejections should be withdrawn and that Claims 4, 7, 20 and 21 are in condition for allowance.

### **REJECTION OF CLAIMS 4, 7 and 20 - 21 UNDER 35 U.S.C. 103(a)**

The Examiner rejected Claims 4, 7, 20 and 21 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,532,585 to Oudet *et al.* (“Oudet”) in view of U.S. Pub. No. 2003/0137293 to Welsch *et al.* (“Welsch”). As discussed below, this rejection is respectfully traversed.

#### **CLAIMS 4 and 7**

Independent Claims 4 and 7 have been amended to clarify features of the assist stator. More specifically, amended Claim 4 clarifies that “the assist stator has a second pair of opposed walls corresponding to front and back faces of the part of the magnet that does not enter the area and *transverse walls extending from the second pair of opposed walls which are separated from each other through a second gap formed between the transverse walls.*” (*emphasis added*). Amended Claim 7 clarifies that the assist stator consists of “a magnetic body having a second pair of opposed walls forming a second area which allows the slider to move while keeping a predetermined clearance and *transverse walls extending from the second pair of opposed walls which are separated from each other through a second gap formed between the transverse walls*, wherein there is a third gap between the assist stator and the main stator.” (*emphasis added*). The structure of the assist stator including the transverse walls is described throughout the specification (*see e.g.*, Page 11, Lines 9-15 and Fig. 1) and was originally claimed in previously cancelled Claim 16.

In the present application, by determining the presence of the gap Ga of the assist stator 141 (241) and adjusting a clearance of the gap Ga, it is possible to correct and alter output characteristics of the sensor. (Page 16, Lines 26-28; *see e.g.* Figs. 3(b) and 4(b)). According to an embodiment of the present invention, Figure 24 illustrates the relationship

between the gap of the assist stator (as formed between the transverse walls) and the hysteresis. (Page 29, Lines 18-21). As shown in Figure 24, the broader the gap of the assist stator, the smaller the hysteresis in the range in parallel translation. (Page 29, Lines 18-24).

In rejecting Claim 4, the Examiner acknowledged that Oudet fails to show an assist stator for preventing magnetic flux, which is generated in a part of the magnet that does not enter the area, from leaking out to the main stator, wherein there is a second gap in the assist stator. Additionally, in rejecting Claim 7, the Examiner acknowledged that Oudet fails to show an assist stator arranged at a second gap intersecting with a moving direction of the slider from the main stator, the assist stator consisting of a magnetic body having a pair of opposed walls forming a second area allowing the slider to move while keeping a predetermined clearance, wherein there is a third gap in the assist stator. To support the rejection of the assist stator elements of Claims 4 and 7, the Examiner cited to conductance piece 2 of Welsch (Fig. 1).

Figure 1 of Welsch does not disclose or even suggest an assist stator having a second pair of opposed walls and transverse walls extending from the second pair of opposed walls which are separated from each other through a second gap formed between the transverse walls, as required by Claims 4 and 7. The conductance piece 2 has an opening that allows the magnet 6 to slide (shown as the left side), but there is no opening on the other side (shown as the right side). The conductance piece does not include transverse walls which are separated from each other through a gap formed between the transverse walls. None of the figures or corresponding sections of Welsch show otherwise. Oudet in combination with Welsch does not teach nor render obvious all features or elements of Claims 4 and 7. Accordingly, Claims 4 and 7 are patentable over Oudet in view of Welsch.

#### **CLAIMS 20 and 21**

Claim 20 depends from Claim 4, and Claim 21 depends from Claim 7. Accordingly, for at least the same reasons discussed above, Claims 20 and 21 are patentable over Oudet in view of Welsch.

**CONCLUSION**

The foregoing is submitted as a complete response to the Office Action identified above. This application should now be in condition for allowance, and Applicant solicits a notice to that effect. The Commissioner is authorized to charge any additional fees that may be due or credit any overpayment to Deposit Account No. 11-0855. If there are any issues that can be addressed via telephone, the Examiner is asked to contact the undersigned at 404.685.6799.

Respectfully submitted,

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